

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 03/086369 A2

(51) International Patent Classification⁷: **A61K 9/51**

MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/CA03/00499

(22) International Filing Date: 4 April 2003 (04.04.2003)

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/369,838 5 April 2002 (05.04.2002) US

(71) Applicant (*for all designated States except US*): **UNIVERSITE DE MONTREAL** [CA/CA]; 2900 blvd. Edouard Montpetit, Montréal, Québec H3T 1J4 (CA).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HILDGEN, Patrice** [CA/CA]; 779 Montée Gravel, Montréal, Québec H7X 2A9 (CA). **PANOYAN, Avedis** [CA/CA]; 524-83rd Avenue, Chomedey, Laval, Québec H7W 2W1 (CA). **LACASSE, François-Xavier** [CA/CA]; 79 Des Cyprès, Ste-Anne-des-Lacs, Québec J0R 1B0 (CA). **QUESNEL, Richard** [CA/CA]; 5320 St-Dominique, app. 8, Montréal, Québec H2T 1V4 (CA). **RIZKALLA, Névine** [CA/CA]; 1000 rue Lawlor, app. 506, St-Laurent, Québec H4N 1R2 (CA).

Published:

— without international search report and to be republished upon receipt of that report

(74) Agent: **ORLHAC, Thierry**; Robic, 55 St-Jacques, Montréal, Québec H2Y 3X2 (CA).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STEALTHY POLYMERIC BIODEGRADABLE NANOSPHERES AND USES THEREOF

(57) **Abstract:** Disclosed herein are stealthy polymeric biodegradable nanospheres each comprising: (i) a polyester-polyethylene multiblock copolymer; (ii) optionally a polyester entangled with the multiblock copolymer to give rigidity to the nanospheres; and (iii) optionally a pharmaceutical compound incorporated therein. Also disclosed is the use of such nanospheres for the preparation of a medicament having a long-term and non-toxic release of a pharmaceutical compound into a mammal, and the method for preparing a stealthy polymeric biodegradable nanospheres.

WO 03/086369 A2